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June 4, 2007

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch, Secretary
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: WT Docket No. 06-150; CC Docket No. 94-102; WT Docket No. 01-309; WT Docket No. 03-264; WT Docket No. 06-169; PS Docket No. 06-229; WT Docket No. 96-86

Dear Secretary Dortch:

On behalf of L-3 Communications Corporation ("L-3"), please find attached Reply Comments filed in response to the April 27, 2007 Further Notice of Proposed Rulemaking in the above-captioned proceeding.

As described in the Reply Comments, initial comments demonstrate that support for the continued availability of wideband capability among actual users of public safety spectrum is overwhelming. This fact alone should convince the Commission to reverse its tentative conclusion to terminate wideband use in the 700 MHz public safety spectrum.

Kindly refer any questions in connection with this letter or the enclosed comments to the undersigned.

Very truly yours,

Thomas McCann Mullooly

Attachment

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In the Matter of	)	
	)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands	)	WT Docket No. 06-150
	)	
Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems	)	CC Docket No. 94-102
	)	
Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones	)	WT Docket No. 01-309
	)	
Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27 and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services	)	WT Docket No. 03-264
	)	
Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules	)	WT Docket No. 06-169
	)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band	)	PS Docket No. 06-229
	)	
Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010	)	WT Docket No. 96-86

REPLY COMMENTS OF L-3 COMMUNICATIONS CORPORATION

L-3 Communications Corporation ("L-3") provides these Reply Comments in the above-captioned docket. L-3's comments filed last week in response to the Further Notice of Proposed Rulemaking ("FNPRM") noted that (1) for a number of reasons it would be a mistake to end the use of wideband in the public safety 700 MHz spectrum and (2) the "Frontline Proposal" would create untenable conflicts between the goals of a commercial licensee and

public safety users and was further beyond the authority granted by Congress to the Commission by granting public safety spectrum for commercial use.

After a review of comments filed by other participants, L-3 notes that among actual users of public safety spectrum support for the continued availability of wideband capability is overwhelming. This fact alone should convince the Commission to reverse its tentative conclusion to terminate wideband use in the 700 MHz public safety spectrum.[1]

These reply comments are organized as follows. **First**, a summary of the widespread support for continued availability of wideband in the public safety spectrum, together with an explanation as to why that is so. **Second**, a response to the suggestion made by some commenters that wideband be available only for a transitional/interim period before a switchover to a wholly broadband public safety spectrum. L-3 is concerned about the risks of such a transitional approach and believes it could only be successful in addressing public safety needs **(a)** if the transition lasted for at least ten years, and **(b)** if assurances were given to all purchasers of wideband systems during that time that their investments would not be stranded and that their equipment would continue to be lawful at the end of the ten-year period. **Third**, the skepticism expressed by commenters regarding the Frontline Proposal is noted. **Fourth**, questions about the legality of the commercial use of public safety spectrum are noted.

I. Continued Access to Wideband Needed by Public Safety Agencies Need and Supported by User Groups

It is not surprising that public service agencies across the country and their representative user groups have all indicated a need for continued access to wideband

[1] We understand from the comments of Commissioners at the Commission's Summit on Spectrum Policy and Management last week that the Commission is committed to listening to the views of public safety agencies on this critical issue. There is little or no support among public safety agencies for eliminating wideband options.

technology. Wideband can play an important role in meeting the secure, mission-critical voice and data needs of first responder and public service agencies in an efficient and effective manner without stranding costs, within the existing 2x6 MHz spectrum allocation, with ability to support multiple independent agencies autonomously, with excellent surge/incident capacity and operate in the absence of central infrastructure. No known or contemplated broadband technology can support these requirements. Broadband does not support these requirements today.

The public safety user community, made up of regional and local police and fire departments and other first-responders, has strongly voiced its support of continued wideband availability and its concerns surrounding the Commission's proposal for a single broadband nationwide network. First responders emphasize that local agencies must be able to choose the communications solutions that best meet the needs of their communities and that a national network precludes this flexibility; they describe their successes with wideband and the investments they have put into new systems that rely on it; they voice concerns about the costs of shifting their networks to a nationwide system and the time it would take to do so; and they discount concerns about interoperability by showing how such issues can and have been solved without a heavy-handed mandate in favor of one technology.

The City and County of San Francisco Comments, at p. 2, calls the Commission's proposal "dangerous" for its failing to allow the implementation of "mission critical wideband and broadband systems for local and regional public safety use." The proposal "threatens local and regional planning efforts" (*id.*) and, if implemented, will result in "failed networks during disasters," when only one shared system, bound to overload and fail, is available. (*Id.* at 3). The proposal will set San Francisco "backwards in time" in "resolving long standing interoperable communications problems." "We have made considerable investments into public safety voice

and data networks . . . all of which required urban area and regional interoperable communications planning and coordination. This proposal will negate all investments towards our 700 MHz wideband or broadband systems." (*Id.* at p. 5).

The City of Fort Lauderdale Comments, at p. 2., also argue that "interoperability can be achieved without the Commission mandating a single broadband technology and limiting the spectrum to only a nationwide network. Today, public safety agencies throughout Florida are achieving mission critical voice communications interoperability across disparate technologies. Similarly, there are a number of ways to achieve interoperability among wideband and various broadband technologies, both at the network connectivity level and the radio-to-radio level."

The Mower County, Minnesota Office of the Sheriff comments that the lower cost of presently available wideband systems make them attractive and perhaps the only solution for many rural areas. The chilling effect of a possible phase out of wideband, with the resulting risks to public safety, is made clear. They write, at p. 1: "We were prepared to make a significant financial investment in a wireless data network to provide critical information to our public safety responders. [Compared with the lower] cost to implement a wideband 700 MHz system, . . . [i]t is unlikely that we could afford broadband access, even if it was available in our area. We feel very strongly that the Further Notice will not only prevent us from moving forward with this very important project, but it will likely preclude our county from ever having access to a high speed data network."

The State of California comments, at 8, argue that "the Commission should allow public safety entities to retain access to some wideband channels such that they can license and construct local data systems where necessary until such time as the "E" Block auction winner is willing to construct in that area."

Region 14 (Indiana) notes on page 2 of its comments that "the FCC's proposal to eliminate any option for agencies to deploy wideband technologies [means] those agencies will have no high speed data option until such time as a nationwide broadband network is built out."

Orange County, California Comments, at p. 1-2, states that "although a nationwide public safety 700 MHz system has merits, the implications of this proposal and its adverse impact will greatly outweigh the benefits of such a network and have far reaching negative impacts over many years" and that they are "very concerned" that the proposed rules would "virtually eliminate any opportunity to construct, own, or implement mission critical wideband and broadband systems . . . ."

The Association of Public-Safety Communications Officials ("APCO") argues that the Commission is wrong to dismiss the wideband option and that, at the least, it must be maintained as a "default" technology in some areas. APCO states, at p. 6, that "[a]s valuable as a national public safety broadband network will be, it will not replace current public safety land mobile radio systems or frequency allocations. Present day systems provide a quality of service, functionality, coverage, and reliability that a national broadband network will likely require decades to match. In the meantime, and perhaps, indefinitely, more traditional radio systems will continue to provide mission-critical public safety communications."

The National Public Safety Telecommunications Council ("NPSTC") emphasizes that full implementation of a nationwide broadband system will take time and that many local agencies will not be able to afford the migration to broadband, which would be significantly more costly to them. NPSTC thus does not support any proposal failing to resolve these issues that come with a transition from wideband to broadband. NPSTC states that "[w]ideband operations are considerably more affordable than broadband, a circumstance that will not change

dramatically soon . . . . This significant cost differential between wideband and broadband, and terrain and other geographic factors combined with agency service requirements that need only data services will otherwise lead many agencies to deploy wideband. The Further Notices' elimination of wideband and the Ninth NPRM's failure to present a viable economic model will move all costs to state and local government. The result will deny access to the 700 MHz band by agencies unable to pay . . . . The Commission should recognize the benefits of wideband for the near future, the importance of local participation and that a broadband network will not be constructed and deployed nationwide immediately subsequent to the broadcast transition in 2009." (NPSTC at pp 17-18).

On interoperability, public safety agencies correctly note that a standards-based interface can ensure interoperability. Based on their experience, local wideband networks can be made interoperable with a national broadband network with existing technology. For example, the Texas Statewide Interoperability Executive Committee ("TSIEC") suggests that a "suite of open standards for public safety high speed wireless data communications networks at 700 MHz" would be "more viable and advantageous" than a nationwide broadband mandate. (TSIEC Comments, at p. 6). Motorola similarly argues that "wideband technologies under local control [can] co-exist harmoniously with a nationwide public safety broadband network" and that "connecting the infrastructure of the systems together is relatively straightforward.." (Motorola Comments, at pp. 20-21). L-3 agrees.

L-3 further acknowledges that broadband has significant promise. But the Commission should not let the promise of one technology dominate the focus of the structuring of 700 MHz public safety spectrum. The goal is not a beautiful technology – the goal is to enhance public safety. The technology used is simply a means to the end. Thus the question has

to be asked of whether a particular approach to technology enhances or detracts from the needs of the users. Public safety agencies have spoken on that issue quite clearly: wideband supports mission critical needs today and cannot be adequately replaced. Broadband does not fit the mission critical needs of the agencies today, but wideband does.

L-3 urges the Commission to listen to these public safety agencies and reverse its tentative conclusion to eliminate the use of wideband in the public safety 700 MHz spectrum.

II. Transitional/Interim Period

A. Significant Drawbacks to Transitional Period Concept

L-3 notes that certain commenters have suggested that wideband be allowed for some type of transitional period before a transition to a total broadband environment. There are significant drawbacks to this idea.

First, it would likely immediately chill any investment in public safety systems which may currently be considered. For example, Mower County Minnesota, as noted above, appears to have suspended its plans to purchase a wideband solution to its communications needs merely at the suggestion in the FNPRM that the FCC was tentatively prepared to cease issuing new wideband licenses.

Similarly, ongoing research into wideband systems, which in large part was launched in response to FCC initiatives, and future research, would be negatively impacted if the FCC declares that wideband's days are numbered. Private investment in such research would be discouraged – inhibiting Congressional efforts to stimulate private investment in this area – and research and development investment in general would be discouraged as investors might fear future volatility on these issues from the FCC. TSIEC, for example, opposes the nationwide broadband-only requirement and recognizes that a standards-based model "would allow the marketplace and manufacturers to provide innovative ideas and solutions [so that] users have

their respective needs met and benefit by being provided with options . . . ." (TSIEC comments, at p.6). A Commission mandate banning wideband for 700 MHz public safety would send a clear signal to the marketplace and manufacturers, to the detriment of public safety.

Second, by chilling such investment, immediate and near term public safety needs might not be met. If the FCC's actions cause Mower County to abandon its plans to purchase a wideband solution, and cause equipment makers to cease development of new wideband technologies, it is impossible to foresee the amount of harm that could result in emergency situations if public safety technology decisions are unnecessarily constrained. Similarly, Region 22 (Minnesota) Public Safety Regional Planning Committee ("Region 22") indicates the significant lead time involved in implementing public safety communications systems, involving "several years" for procurement, contracting, detailed design review, FCC review of regional plans even before a license application is submitted. (Region 22 Comments, at p. 6). At present, even before implementation of the proposed ban on wideband, "numerous public safety agencies have been frustrated at their inability to receive license grants for wideband systems" while "no less than four wideband systems have been purchased and deployed over the past few months" in Region 22 alone. *Id.* Such productive and ongoing responses to public safety needs would be severely harmed by a Commission mandate preventing wideband use in the public safety 700 MHz spectrum.

Third, broadband – for all its promise – is still something of a gamble. Will affordable broadband solutions to the mission critical voice and data needs of public safety ever be developed? They do not exist today. Broadband protocols do not even address adequate mission critical aspects that are required in public safety applications. Will the extra spectrum needed to support broadband services ("E-Block") ever be made available? What would be the

impact of any further delay in the DTV transition on spectrum available for broadband? Does the FCC really want to gamble with public safety and security? Should the FCC force the entire 700 MHz public safety spectrum into a broadband straightjacket, it will have put significant public safety needs in the hands of a technology not yet developed.

Doing nothing while the industry waits for the next technology to become viable is not an acceptable position. Multiple vendors have been working on and have wideband systems ready to deploy today. There is no sound reason to prevent the use of such systems today, in hopes that perhaps a better system, if all goes right, might be available in some distant tomorrow.

B. Certain Conditions Could Ameliorate the Chilling Drawbacks of a Transition Period

Neither L-3 nor other comments we have reviewed advocate for a total abandonment of broadband. It is possible the broadband solutions could someday be an appropriate part of a nationwide public safety communications infrastructure. But that day has not yet been reached, and it is not clear at this point that it ever will be reached. That has led some commenters to suggest that some type of transitional period before the full implementation of a broadband-only policy should be considered, with wideband being permitted to some extent.

In order to avoid the chilling effect and negative consequences which would flow from an immediate broadband-only policy, a transitional period could only work if the Commission implemented it with two essential features, (1) wideband licenses could continue to be obtained for a minimum ten year period and (2) all wideband systems and technologies put into use during that timeframe would be grandfathered from any broadband-only rule.

1. Ten-year Timeframe

Because of the important capabilities provided today only by wideband, and because it is unpredictable as to how long it will take broadband to duplicate these capabilities, it is important that any transition period provide a sufficient amount of time to allow for the continued use and development of wideband. Agencies like Mower County Office of the Sheriff that are today considering making an investment in wideband technology need to know that these systems will not become obsolete overnight. They are needed today as the best response to public safety needs. It would be counterproductive, and perhaps dangerous, for the Commission to kill off such endeavors at this moment. A timeframe of ten years would fit within the business planning models of most users and technology developers.

2. Grandfathering of Wideband Systems Purchased or Used During the Transition Period

It is crucial that there not be a sudden termination of all wideband uses at the end of the ten-year period. Such a sudden termination would have the same deleterious affects in terms of chilling current investment describe above.

Rather, agencies who purchase wideband systems during the ten-year period need to know that they will be able to continue in legal and valid use throughout their service lifetimes. Thus, any licenses granted during the ten-year interim period should continue to be valid as long as the purchased wideband system, along with any upgrades, is operational. This would allow the market and users to determine the pace of the eventual shift, should it come about, to a fully broadband public safety spectrum as potential improvements in broadband capabilities and costs become evident in the marketplace.

This grandfathering requirement would be the only way that business decisions could be made during the interim period with confidence that investments would not be artificially stranded.

III. Frontline Proposal Is Flawed

L-3 reiterates its position that the Frontline Proposal to issue a nationwide license to a commercial entity that could use public safety spectrum is both unwise and unlawful. Nothing in the comments filed in response to the FNPRM gives L-3 any confidence that the inevitable conflict of interest between commercial and public safety goals can be adequately resolved. It is clear from the comments that the scope and necessary details for the program are far from mature and should not be approved in the current form. The Statement of Commissioner Copps in the FNPRM eloquently poses many of the problems presented by this risky idea.

A. Questionable Legality of Commercial Use of Public Safety Spectrum

Comments filed by L-3 (at p. 10), Orange County (at p. 4) and NPSTC (at p. 15-16) all question the Commission's authority to allow commercial use of public safety spectrum. Going forward with the Frontline Proposal or a similar approach would seem to be a direct violation of the allocation requirements of 47 U.S.C. § 337(a)(1).

We found no analysis supporting the view that the Commission has the authority to allow public safety-allocated spectrum to be used for commercial use.

Conclusion

The Commission should abandon its plan to terminate the use of wideband in the public safety 700 MHz spectrum. If the Commission nonetheless believes it must move toward the eventual elimination of wideband, it should do so only if the transition period included a ten year period during which new wideband installations could be licensed and with all such systems being grandfathered.

Finally, the Commission should abandon the Frontline proposal as being unworkable and beyond Commission authority.